38. Cephalopoda from the Monte Bello Islands.

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(Text-figure 1.)

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Of the two species of Cephalopoda obtained by Mr. P. D. Montague from the Monte Bello Islands, one specimen is of considerable interest—a Myopsid which has been referred after some hesitation to *Sepiadarium*.

The differences between the latter genus and the closely-allied *Sepioloidea*, though they have been touched upon by several authors, have not been fully summarized as yet. The following table gives the more important differences:—

Sepiadarium Steenstrup.	*Sepioloidea* d'Orb.
1. Funnel attached to mantle by a ligament (**1**) (**2**).	. . . . by cartilaginous plugs of the mantle that fit into sockets on the funnel (**1**) (**2**).
2. Ventral pores absent (**2**).	. . . . present (**2**).
3. Mantle fringe absent (**2**).	. . . . present (**2**).
4. Fins short (**4**).	. . . . long (**4**).
5. The hectocotylized arm bearing on its distal half a series of transverse ridges, which are the laterally produced peduncles of the suckers (**4**).	Suckers of the hectocotylus persisting as small papillæ; the arm grooved diagonally on its inner side (**4**).

In respect of Nos. 1, 2, 3, and 5 in the above list, the form here described is referable to *Sepiadarium*. The length of the fins, on the other hand, suggests affinity with *Sepioloidea*. It is not desirable on such slender grounds, however, to create a new genus intermediate between the two forms under discussion for the reception of this species. But it is certain that in the present state of our knowledge we are entitled to regard this as an unusual form of *Sepiadarium*, intermediate in respect of one character between that genus and *Sepioloidea*.

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Up to the present *Sepioloidea* appears to be regarded as the Australian form of the two Sepiadarian genera, while *Sepiadarium* is considered the Pacific form. We now find that the latter extends its range to W. Australia, though not by a typical member of the genus. Whether, in the first instance, the distinction of the two forms into Pacific and Australian rested upon secure and sufficient evidence we cannot say as yet. If the investigation of the Cephalopod faunas of these areas upholds this distinction, the interest and importance of this species of *Sepiadarium* with *Sepioloidea*-characters, as occurring in the distributional area of the other genus, will be increased.

The structure of the hectocotylus corresponds closely with that described by Brock (5) for *Sepiadarium*. It should be observed that the series of transverse ridges or bars (Brock's "Querbalken") are of such a shape as to suggest the obvious conclusion that they represent the fused bases of the pairs of suckers, a proximal member of the morphologically posterior row being fused with a distal member of the morphologically anterior row.

1. Sepiadarium auritum, sp. n. (Text-fig. 1.)

External appearance.—The animal is small and squat, the width of the mantle area being about equal to its length. The fins are rather long and ear-shaped, the inferior portion being slightly broader than the superior. The mantle-insertion at the neck is tolerably broad, while posteriorly the edge of the mantle exhibits a very slight concavity.

There is a very feebly developed interbrachial membrane. On the arms the suckers are arranged in two alternating rows, save at the distal third, where they become abruptly smaller and more irregularly disposed.

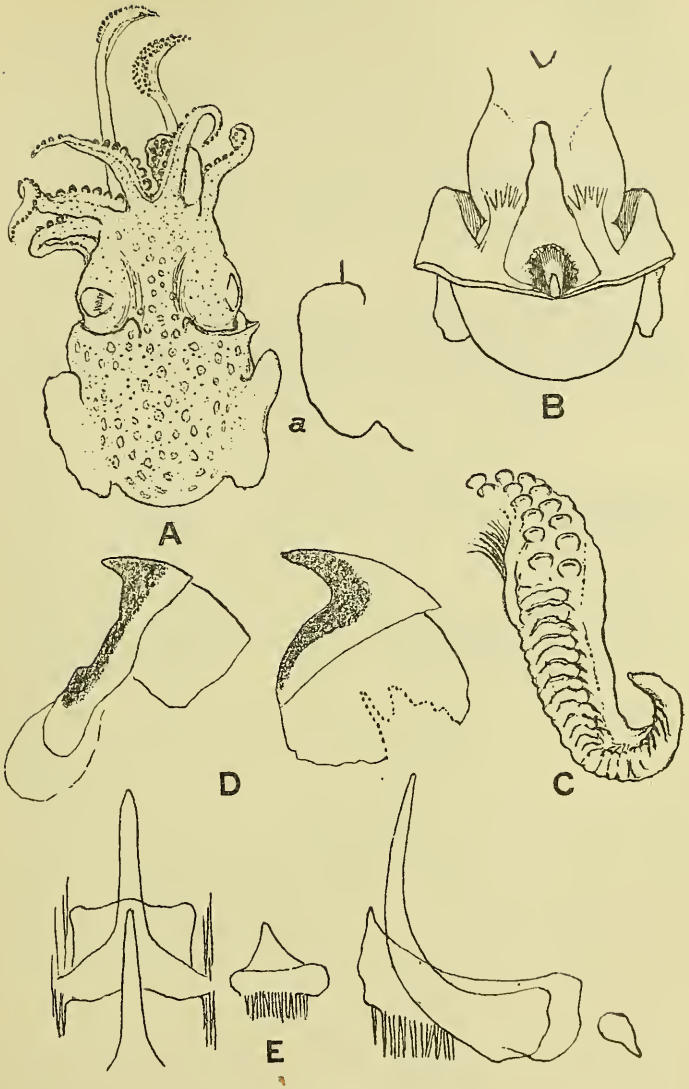
The tentacular arms are provided with a short membrane conterminous with the area occupied by the suckers.

The colour (formalin-preserved specimen) is dull grey, covered on the dorsal surface by numerous small round patches of pale red or brown and fine black or dark-brown spots. Only the latter are continued on to the ventral surface and the arms. The patches and spots are found, though more sparsely, upon the fins. For character of the hectocotylized arm, *v.* text-fig. 1, C.

Dimensions:—

Mantle, max. length	11·25	mm.
,, max. breadth	12·5	,,
Length of fins	8·75	,,
Total length (from apex of mantle to interbrachial membrane of the ventral arms)	17·5	,,
Length of arms: 1st pair	7	,,
2nd ,,	6·8	,,
3rd ,,	9	,,
4th ,,	7	,,

Text-figure 1.



Sepiadarium auritum.

A. Dorsal view. × 2 : *a*, outline of fin.
B. Attachment of funnel to mantle. × 2.
C. Hectocotylus. × 6.
D. Mandibles. × 12.
E. Radula. 4 oc. × 6 obj.

Internal characters.—The *mandibles* (text-fig. 1, D).

The *radula* (text-fig. 1, E) resembles that of *S. kochii* figured by Appellöf (3) pretty closely ; but differs in the condition of the basal plate of the median tooth, which is much deeper and of a different shape, in certain characters of the lateral tooth and of the inferior marginal. It is unfortunately impossible to give a fuller account of the internal characters, owing to the fact that only one specimen is available for examination.

Locality. Dredged off Hermite I. (Monte Bello Islands), W. Australia.

Type in the British Museum (Zoological Department).

2. Polypus sp.

Two specimens from the same station (one immature).

This form, which might be referable to more than one Pacific species, cannot be satisfactorily identified.

Literature referred to.

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